What is claimed is:

1.   In a disc drive having a plurality of recording surfaces on which a plurality of concentric data tracks are respectively defined so that the tracks on the recording surfaces at each given radius make up a cylinder, a corresponding plurality of heads adjacent the respective recording surfaces, a servo circuit which selectively performs seeks to move the heads from an initial track to a destination track, and a control processor which schedules a plurality of pending access commands stored in a command queue, a method for optimizing the transfer of data between the recording surfaces and a host computer, comprising steps of:

      (a) determining a radial positional offset between a presently active head and a different, target head with respect to the corresponding recording surfaces;

      (b) identifying an estimated seek distance comprising a radial distance between an initial track over which the presently selected head is disposed and a destination cylinder having a destination track to which the target head is to be moved;

      (c) identifying a corrected seek distance in relation to the positional offset;

      (d) obtaining a corrected seek time from a seek profile table in relation to the corrected seek distance; and

      (e) using the corrected seek time to schedule an access command associated with the destination track.

2.   The method of claim 1, in which the determining step (a) further comprises a step of storing the measured positional offset values in a head offset table in memory accessible by the control processor.

3.   The method of claim 1, in which the identifying step (c) further comprises a step of rounding the corrected seek distance to the nearest whole number of tracks.

4.   The method of claim 1, further comprising a step of:

(f) executing a seek to place the target head over the destination track.

5.   The method of claim 4, in which the executing step (f) comprises steps of:

(f1) applying current to an actuator motor to move the presently active head to a final cylinder different from the destination cylinder while using the presently active head to transduce servo data from the associated recording surface, wherein a radial distance between the final cylinder and the destination cylinder is nominally equal to the radial positional offset between the presently selected head and the target head; and

(f2) performing a head switching operation to switch to the target head so that the target head transduces servo data from the associated recording surface, wherein at the conclusion of the head switching operation the target head is nominally over the destination track.

6.   The method of claim 4, in which the executing step (f) comprises steps of:

(f1) performing a head switching operation to switch to the target head; and

(f2) applying current to an actuator motor to move the target head to the destination cylinder while using the target head to transduce servo data from the associated recording surface.

#785115

7.　　A disc drive, comprising:

a plurality of recording surfaces on which a plurality of concentric data

tracks are respectively defined so that the tracks on the recording

surfaces at each given radius make up a cylinder;

a corresponding plurality of heads which store data to and retrieve data

from the data tracks on the associated recording surfaces;

a servo circuit which selectively performs seeks to move the heads from an

initial track to a destination track;

a memory which stores a plurality of pending access commands received

from a host computer; and

a control processor which controls the transfer of data between the

recording surfaces and the host computer in response to each access

command, in which the control processor schedules the execution of

the pending access commands in relation to a corrected seek time

for each pending access command determined in relation to an

estimated seek length as a radial distance between an initial cylinder

over which a presently active head is located and a destination

cylinder having a destination track corresponding to the associated

access command, a radial positional offset value between the

presently active head and a different, target head associated with the

recording surface having the destination track, and a table of

estimated seek times by seek length.

8.　　The disc drive of claim 7, in which the control processor stores the
radial positional offset values in a head offset table in a memory accessible by the
control processor.

9.　　The disc drive of claim 7, in which the servo circuit performs a
selected one of the pending access commands to place the associated target head
over the associated destination track by applying current to an actuator motor to
move the presently active head to a final cylinder different from the destination

cylinder while using the presently active head to transduce servo data from the associated recording surface, wherein a radial distance between the final cylinder and the destination cylinder is nominally equal to the radial positional offset value between the presently selected head and the associated target head, and then

5   performing a head switching operation to switch to the associated target head so that the associated target head transduces servo data from the associated recording surface, wherein at the conclusion of the head switching operation the associated target head is nominally over the destination track.

10   10.   The disc drive of claim 7, in which the servo circuit performs a selected one of the pending access commands to place the associated target head over the associated destination track by performing a head switching operation to switch to the associated target head, and then applying current to an actuator motor to move the associated target head to the destination cylinder while using the

15   associated target head to transduce servo data from the associated recording surface.

        11.   The disc drive of claim 1, in which the control processor rounds the corrected seek distance to the nearest whole number of tracks, and then identifies

20   the corrected seek time from the table of estimated seek times by seek length using the rounded, corrected seek distance.

#785115

12.   A disc drive comprising:

a plurality of heads adjacent a corresponding plurality of recording surfaces

    on which a plurality of concentric data tracks are respectively

    defined so that the tracks on the recording surfaces at each given

    radius make up a cylinder; and

means for scheduling a plurality of pending access commands from a host

    computer to access a corresponding plurality of destination tracks

    on different recording surfaces each having an associated target

    head different from a presently active head, by determining a

    corrected seek time for each of the pending access commands which

    accounts for radial positional offset between the presently active

    head and the associated target head.

13.   The disc drive of claim 12, wherein the means for scheduling

comprises a control processor which schedules the execution of the pending access

commands in relation to the corrected seek time for each pending access command

determined in relation to an estimated seek length as a radial distance between an

initial cylinder over which the presently active head is located and a destination

cylinder having a destination track corresponding to the associated access

command, a radial positional offset value between the presently active head and

the associated target head, and a table of estimated seek times by seek length.

14.   The disc drive of claim 12, wherein the means for scheduling

performs steps of:

    (a) determining a radial positional offset value between the presently active

        head and the associated target head with respect to the

        corresponding recording surfaces;

    (b) identifying an estimated seek distance comprising a radial distance

        between an initial track over which the presently selected head is

        disposed and a destination cylinder having a destination track to

        which the associated target head is to be moved;

#785115

(c) identifying a corrected seek distance in relation to the positional offset;

(d) obtaining a corrected seek time from a seek profile table in relation to the corrected seek distance; and

(e) using the corrected seek time to schedule the access command associated with the destination track.

#785115